

CLAIMS

1. A device for ligament reconstruction comprising:
a tip portion having two parallel through-holes formed therein in juxtaposition;
5 a rear end portion having two through-holes formed therein in juxtaposition coaxially with the two through-holes of the tip portion; and
a connection portion connecting the rear end portion and the tip portion and having a single connection hole connecting one of the through-holes of the tip portion coaxially to one of the through-holes of the
10 rear end portion, the connection portion being thinner and longer than the tip portion and the rear end portion,
wherein the tip portion has a generally elliptical or rectangular cross section elongated in a direction in which the through-holes thereof are juxtaposed, so that the tip portion is driven into an articular bone to form
15 a flat socket in the bone by hitting the rear end portion.
2. A ligament reconstruction device as set forth in claim 1, wherein the generally elliptical or rectangular cross section has a major axis/minor axis ratio of 2 to 5.
3. A ligament reconstruction device as set forth in claim 1 or 2, wherein
20 the elliptical cross section is of a generally oval shape or a racetrack-like elliptical shape.
4. A ligament reconstruction device as set forth in claim 3, wherein the racetrack-like elliptical shape is defined by a pair of parallel straight lines spaced a distance of 3 to 6mm from each other and each having a length of
25 4 to 8mm and a pair of semicircles connecting opposite ends of the straight lines.
5. A ligament reconstruction device as set forth in claim 1 or 2, wherein the rectangular cross section has a minor edge length of 3 to 6mm and a major edge length of 7 to 14mm.

6. A ligament reconstruction device as set forth in any of claims 1 to 5, wherein the tip portion has a cross sectional area of 21 to 84mm².
7. A ligament reconstruction device as set forth in any of claims 1 to 6, wherein the tip portion has a length of 5 to 10mm.
- 5 8. A ligament reconstruction device as set forth in any of claims 1 to 7, wherein the connection portion has a generally round or oval cross section.
9. A ligament reconstruction device as set forth in any of claims 1 to 8, wherein the ligament reconstruction is reconstruction of an anterior cruciate ligament graft.
- 10 10. A method for ligament reconstruction utilizing a ligament reconstruction device as recited in any of claims 1 to 9, the method comprising the steps of:
- drilling a guide pin into an articular bone;
- fitting the guide pin in two of the through-holes and the connection
- 15 hole of the ligament reconstruction device aligned with each other, and drilling another guide pin into the articular bone through the other two through-holes of the ligament reconstruction device;
- removing portions of the bone around the previously-inserted two guide pins by over-drilling; and
- 20 driving the tip portion of the ligament reconstruction device into the articular bone toward a lateral cortex of the articular bone by hitting the rear end portion of the ligament reconstruction device with the two guide pins respectively fitted in the two through-holes and the connection hole of the ligament reconstruction device aligned with each other and in the other
- 25 two through-holes of the ligament reconstruction device to form a flat socket into which one end portion of a ligament graft is to be inserted.
11. A ligament reconstruction method as set forth in claim 10, wherein the flat socket has a depth of 10 to 23mm.
12. A ligament reconstruction method as set forth in claim 10 or 11,

wherein the ligament graft is an anterior cruciate ligament graft with a bone piece.

13. A ligament reconstruction method as set forth in any of claims 10 to 12, wherein the ligament reconstruction is reconstruction of an anterior
5 cruciate ligament graft, and the articular bone is a femur.